

INTERNATIONAL SEARCH REPORT

National Application No

r/GB2004/002253

A. CLASSIFICATION OF SUBJECT MATTER

IPC 7 F04B53/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 F04B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal

C. DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US R E37 483 E (FLINDALL STEPHEN J ET AL) 25 December 2001 (2001-12-25) cited in the application the whole document | 1-13 |
| A | US 6 209 445 B1 (ROBERTS JR EMMETT T ET AL) 3 April 2001 (2001-04-03) column 2, line 49 - column 3, line 11 | 1,12 |
| A | DE 32 18 000 A (WIRTH CO KG MASCH BOHR) 24 November 1983 (1983-11-24) claim 1; figures 4,5 | 1,12 |
| A | DE 23 56 604 A (WAGNER MASCHF PAUL HEINZ) 15 May 1975 (1975-05-15) claim 1 | 1,12 |
| | -/- | |

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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Date of the actual completion of the international search

17 September 2004

Date of mailing of the international search report

24/09/2004

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

| Category * | Citation of document, with indication, where appropriate, of the relevant passages | Relevant to claim No. |
|------------|--|-----------------------|
| A | US 4 550 646 A (MILLER JOHN E) 5 November 1985 (1985-11-05) column 1, line 39 - column 2, line 11 ----- | 1, 12 |

INTERNATIONAL SEARCH REPORT

ational Application No

/GB2004/002253

| Patent document cited in search report | Publication date | Patent family member(s) | Publication date |
|---|---------------------|---|--|
| US RE37483 E | 25-12-2001 | US RE37483 E1 GB 2285489 A ,B US 5572920 A | 25-12-2001 12-07-1995 12-11-1996 |
| US 6209445 B1 | 03-04-2001 | AU 6023899 A CA 2342779 A1 GB 2360331 A ,B WO 0014406 A2 | 27-03-2000 16-03-2000 19-09-2001 16-03-2000 |
| DE 3218000 A | 24-11-1983 | DE 3218000 A1 | 24-11-1983 |
| DE 2356604 A | 15-05-1975 | DE 2356604 A1 | 15-05-1975 |
| US 4550646 A | 05-11-1985 | NONE | |